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HITTITE AN INDO-EUROPEAN LANGUAGE?

BY CARL D. BUCK

In 1915 the announcement was widely circulated that the riddle of the Hittite language had at last been solved and that it proved to be Indo-European. It may not be superfluous to remind the readers of this journal that until comparatively recent times so little was known of the Hittites, beyond their mention in the Old Testament, that the brief article in Smith's *Classical Dictionary* described them only as "one of the tribes of the Canaanites whom the Israelites found in Palestine." Now it is known that these Hittites of Palestine were only an outpost of a great empire, the seat of which was in Asia Minor, and which for some centuries (about 1450-1200 B.C.) rivaled the power of Egypt and surpassed that of Assyria.¹ Its history has been recovered from Egyptian and Assyrian records, the uncouth rock sculptures scattered over Asia Minor have been recognized as of Hittite origin, and finally the capital in Cappadocia was laid bare by the German excavations of 1906-7 at Boghas-Keui. Constituting the earliest known state in Asia Minor, and one of the great powers in the period when Cnossus was at its zenith and Troy a flourishing city, the Hittites fall well within the range of interest of the student of early Aegean civilization.

Of native Hittite records there were known for a time only those inscribed in hieroglyphics (pictographs) of unknown value. The decipherment by Jensen, who thought to prove relationship between Hittite and Armenian, was generally rejected as fanciful, and the attempts by Sayce and later by Thompson convinced scholars only in some meager details. Among the horde of cuneiform letters discovered in 1888 at Tell-el-Amarna in Egypt, mostly in Babylonian, which at the time they were written (about 1400 B.C.) was the international language of diplomacy in the Near East, there were a few in the same form of writing but not in the Babylonian language,

¹ Cf. Breasted, *Ancient Times*, pp. 239 ff.; Hall, *Ancient History of the Near East*, pp. 326 ff.; Garstang, *Land of the Hittites*; Ed. Meyer, *Reich und Kultur der Chetiter*.

namely the "Mitanni letters" and the "Arzava letters." In 1902 the Norwegian Assyriologist Knudtzon, in collaboration with the Indo-European scholars Bugge and Torp, under the sensational title *Die zwei Arzawa-Briefe. Die ältesten Urkunden in indogermanischen Sprache*, sought to show that the Arzava letters were in Hittite (this is now certain) and that the language was Indo-European. Among Indo-European scholars, apart from his collaborators, the evidence for Indo-European relationship was accepted by Pedersen (*Nord. Tidsskrift for Filol.*, 3 Raekke, XII, 1 ff., *Idg. Anz.*, XV, 280 ff.), but rejected by others, as Horn (*Idg. Anz.*, XV, 1), Kretschmer (*Deutsche Literaturzeitung*, 1903, pp. 778 ff.), and Bloomfield (*Amer. Jour. Phil.*, XXV, 14). Hempl's discovery that "the Hittite pictographic texts were written in the same language as the pictographic texts of Minoan Crete, that is, in Greek of the type known to us as Attic," and that the Tell-el-Amarna texts were in Doric (*Trans. Amer. Phil. Assoc.*, XLIV, 185 ff.), is nothing but the wildest phantasy, much as one regrets to say this of one who has contributed so much to American scholarship in the field of English and Germanic philology.¹

The problem was raised to a new plane, with every prospect of final solution, by the discovery at Boghas-Keui of the Hittite archives containing a large body of cuneiform texts in the Hittite language. Fragments of a Sumerian-Babylonian-Hittite vocabulary published by Delitsch (*Abh. Berl. Akad.*, 1914, No. 3) established the meaning of a considerable number of Hittite words. The study of the main body of Hittite texts was intrusted to the Austrian scholar Hrozny, who in 1915 published a preliminary account of his results under the title *Die Lösung des hethitischen Problems (Mitt. der deutsch. Orientgesellschaft*, No. 56, pp. 17-50), in which he declared his complete conviction of having established the Indo-European character of Hittite and gave briefly his most conspicuous evidence. His conclusion was provisionally accepted by Ed. Meyer in an introductory note, and was widely circulated. The contents of the

¹ Inasmuch as some, who have heard rumors that the Indo-European relationship of Hittite is now accepted, have the idea that Hempl's interpretation is thereby vindicated, it must be stated that there is not the slightest connection or resemblance between it and the one to be discussed below. For example, Hitt. *kuiš*, for which see below, p. 187, was taken by Hempl as " = *Kwēs* for *Kō*, a genitive of *Kōs* 'Cos.' "

pamphlet were reported fully and without criticism in the *Journal of the Royal Asiatic Society* for 1919. But skepticism was expressed by some reviewers, notably by Bartholomae (*Woch. f. klass. Phil.*, 1916, pp. 67 ff.), and it was probably the opinion of most scholars that one must suspend judgment, awaiting Hrozný's promised fuller publication. This appeared in 1917, *Die Sprache der Hethiter, ihr Bau und ihre Zugehörigkeit zum indogermanischen Sprachstamm. Ein Entzifferungsversuch*, copies of which have reached this country only within the last few months.

The star witnesses of the previous work reappear, but now fortified and embodied in an exhaustive discussion of the whole inflectional system. Nearly a hundred pages are devoted to the inflection of the noun: *u*-stems, *i*-stems, *a*-stems (IE. *o*-stems and *ā*-stems), *l*-stems, neuters of the mixed *r/n* type, abstracts in *-šar* and *-tar* (understood as blends of *s*- and *t*-stems with *r*-neuters), *n*-stems, and participial *nt*-stems. The identifications of case endings and comparisons with Indo-European may be summarized as follows:

NOM. SING. *-š* (cf. IE. *-s*), as *-uš*, *-iš*, *-aš*

GEN. SING. *-aš*, *-š* (cf. IE. *-os*, *-s*), e.g., for *u*-stems, *-wa-aš* or *-uš* (cf. Lat. *-uos*, and *-ūs* from *-ous*)

DAT. SING. *-i* (cf. IE. cons. *-stem* dative in *-ai/-ei*, or, after Kretschmer, locative in *-i*)

ACC. SING. *-n* (cf. Gr. *-ν* from IE. *-m*), as *-un*, *-in*, *-an*

LOC. SING. *-az* (with no resemblance to an IE. locative singular)

ABL. SING. *-it/d* (cf. IE. *-ēd*, *-ōd* for *o*-stems, and early Latin also *-īd*, *-ūd*)

NOM. PLUR. *-eš*, *-e-eš* (cf. IE. *-es*, *-ejes*, etc.; in *a*-stems, where IE. *-ōs*, explained as transfer from *i*-stems)

GEN. PLUR. *-aš* (no resemblance to IE.)

DAT. PLUR. *-aš* (no resemblance to IE.)

ACC. PLUR. *-uš* (cf. IE. *-ons* for *o*-stems)

Special importance is attached (and quite rightly, if the interpretation of the forms is correct) to the paradigm of *wa-a-tar*, which according to the author means 'water,' and is to be identified with Gr. *ῥδωρ*, OE. *waeter*, etc., namely: acc. sing. *wa-a-tar*; gen. sing. *ú-e-te-na-áš*; loc. sing. *ú-e-te-na-az*; abl. sing. *ú-e-te-ni-it/d*. With this is compared the well-known IE. *r/n* type of neuters, as Gr. *ῥδωρ*, *ῥδαρος*, Umbr. *utur*, abl. *une* from **udne*, OE. *waeter*, but Goth. *watō*, *watins*, Skt. gen. sing. *udnas*; likewise Skt. *ūdhar*, *ūdhnas*,

yakrt, *yaknas*, Gr. *οἶθαρ*, *οἶθατος*, *ἦπαρ*, *ἦπατος*, Lat. *iecur*, *iecineris* (**iecinis*), *femur*, *feminis*, etc.

The numerals unfortunately are expressed by figures. The author finds evidence of *dā-*, *tā-* 'two' in a compound.

Among the pronouns recognized may be mentioned: *ug*, *uga* 'I,' compared with Lat. *ego*, etc., gen. (poss.) *ammēl*, dat. *ammug*, compared with Gr. *ἐμοί*, *ἐμέ*, etc.; *anzaš* 'we,' *anzel* (or better *anzēl*) 'our,' compared with Goth. *uns*, Lat. *nōs*, Skt. *nas*, etc.; *zig*, *ziga* 'thou,' compared with Att. *σύ* (Dor. *τύ*), *σύ-γε* (Hitt. *zi-* from **tū* by a vowel change and subsequent assibilation of *t*, such as is assumed in other cases), gen. *tuēl*, dat. and acc. *tug*, *tuga*; *šume-eš*, *šumāš* 'you,' *šumel* 'your,' compared with Gr. *ὤμεῖς*, Skt. *yusmān*, etc.; a relat.-interrog.-indef. pronoun *kuiš*, compared with Lat. *quis*, Gr. *τίς*, etc. ("Heth. *ku-* ist=idg. *q**"; das Hethitische ist eine *centum*-Sprache!"), nom. sing. masc.-fem. *kuiš*, nom.-acc. sing. neut. *kuit*, gen. sing. *kuēl*, dat. sing. *kuedani*, acc. sing. masc. *kuin*, nom. plur. masc. *kuēš*, etc., also various derivative adverbs, as *kuwabi* 'where' (compared with Lat. *ubi*, *ne-cubi*), *kuwat* 'while,' etc.

Under verbal inflection are given paradigms for the present and preterite indicative and the imperative, active and middle. Present stems corresponding to the IE. *nu-* and *sko-*classes are recognized, in addition to the root class. I quote, with omission of some variants, the following paradigms of the present indicative active:

First singular	<i>jami</i>	<i>ḫarmi</i>	<i>arnumi</i>	
Second singular . . .	<i>jaši</i>	<i>ḫarši</i>	<i>arnuši</i>	<i>daškiši</i>
Third singular	<i>jazi</i>	<i>ḫarzi</i>	<i>arnuzi</i>	<i>daškizzi</i>
First plural	<i>jaweni</i>	<i>ḫarweni</i>		
Second plural	<i>jatteni</i>	<i>ḫarteni</i>	<i>arnutteni</i>	<i>daškitteni</i>
Third plural	<i>janzi</i>	<i>ḫarranzi</i>	<i>arnuwanzi</i>	<i>daškanzi</i>

The resemblance to the IE. personal endings (e.g., Skt. *-mi*, *-si*, *-ti*, *-mas*, *-tha*, *-nti*) is obvious in the first and second singular; in the second plural, if one takes the *-ni* as an added particle as in Vedic *-thana* beside *-tha* (similarly then in the first plural *-weni*, for which a change of *m* to *w* is assumed); and in the third singular and plural, under the assumption of a change of *t* to *z* (cf. Arc. *τίθησι*, *τίθενσι*=Dor. *τίθητι*, *τίθεντι*). For the third persons note also

imperative third sing. *arnuddu*, third plur. *arnuwandu* (cf. Skt. *-tu*, *-ntu*), and present middle third sing. *jatta*, third plur. *janta* (cf. Gr. *-rai*, *-vrai*, Skt. *-te*, *-nte*, or Gr. *-ro*, *-vro*, Skt. *-ta*, *-nta*), also third sing. *jattari*, third plur. *jantari* (cf. *r*-forms in Sanskrit, Latin, Celtic, and "Tocharian").

I have purposely selected for mention those features in which the resemblance to Indo-European is most striking. Many of the other comparisons are worthless as evidence for anyone not already convinced. The author's earlier publication showed that he was not at home in Indo-European comparative philology and left some easy openings for the critic. In the present work he has profited by further consultation with so competent an Indo-European scholar as Professor Kretschmer, and has generally restated his comparisons in a more acceptable manner. Yet he still shows a weakness for citing forms from any or every IE. language and from any date, if thereby he obtains a form more strikingly resembling the Hittite. So in his discussion of *šu-me-eš* 'you,' although he now understands that Gr. *ὕμεις*, Skt. *yusmān*, point to IE. **usme* (*us* weak form to Skt. *vas*, Lat. *vōs*), from which he derives the Hittite form by change of *s* to *š* as in Indo-Iranian, and subsequent metathesis, yet he cannot refrain from repeating his citation of Mod. Pers. *šumā* 'you,' the history of which, as Bartholomae pointed out, is such (cf. Avest. *xšmākəm*) that its close resemblance to the Hittite form could only be accidental. It would not be difficult to pick out items here and there which would seem to discredit the author's understanding of Indo-European relations or his sense of perspective. But to my mind that would only becloud the issue, which must rest in the main on those resemblances which I have summarized above.

Not, of course, on any one of them. Not, for example, on *kuiš* 'who,' and the adverbs *kuwabi*, etc., for one might as well prove the Indo-European affinity of a North American Indian language which shows an interrogative stem *qa-* (*satem*-language!, cf. Skt. *ka-*) in the adverbs *qāma* 'how,' *qaxba* 'where,' etc. (*Handbook of American Indian Languages*, pp. 674, 676). Nor on a nom. sing. ending *-s* or *-š*, which occurs in many languages and has been much overworked as evidence of Indo-European relationship. Nor on

an acc. sing. ending *-n* or *-m*; cf. Finnish acc. sing. *-n* from original *-m* as in Vogul. Nor on one or two personal endings of the verb. Isolated coincidences can of course be found between languages of the most diverse origin. But in the aggregate, the resemblances mentioned above, if the Hittite forms are correctly identified, make a too formidable array to be explained away as accidental. Taken at face value, they point to a dominant Indo-European element in Hittite inflection. All depends upon the correctness of the author's interpretation and identification of the grammatical forms.

In the Preface the author emphasizes the fact that he approached the study of the Hittite texts with no prejudice in favor of Indo-European relationship, rather quite the contrary, and that in the initial stages of his study he depended solely on internal evidence (important clues to the context being furnished by the frequently occurring Sumerian-Babylonian ideograms of known meaning), and that only after being thoroughly convinced that the language was Indo-European did he make use of the etymological method. Now to recall that Jensen made a similar and equally positive statement regarding his method of deciphering the Hittite hieroglyphics ("ohne Hilfe des Armenischen allein aus den Inschriften oder sonstigen Quellen," *Idg. Anz.*, pp. 14, 49), and that countless others have deceived themselves in their estimate of their own method, is perhaps unfair. For Hrozný's work is of a totally different order from those fantastic interpretations which come to mind. (Furthermore the comparative vocabulary by Delitsch had established the meaning of many words, and a certain number of grammatical forms, e.g., nom. sing. *-š*, nom. plur. *-aš*, pron. *anzel* 'our,' *kuid* 'how,' verbal abstract or infinitive in *-war*, etc.) But it appears that the intrusion of the etymological method was speedy, if not immediate.

Take the case where his procedure is most fully described, namely (pp. 61 ff.) in the recognition of a word for water identical with the IE. word and showing the peculiar mixed type which characterizes its IE. inflection (see above, p. 186). No single fact could be more impressive than this, if established beyond the possibility of doubt. The starting-point is a sentence reading *nu NINDA-an e-iz-za-at-te-ni wa-a-tar ma e-ku-ut-te-n(i?)* in which *NINDA* represents a known ideogram for 'bread.' The one solid fact is the ideogram for 'bread.'

This is followed by two words which strikingly resemble IE. words with the meanings 'eat' (Lat. *edo*, etc.) and 'water,' which fit in well with a preceding 'bread.' So much approved, a word for 'drink' is expected, and for *ekuttēni*, which shows no resemblance to the usual IE. root for 'drink' (**pō-*, **pī-*), a Hittite root **eku-* 'drink' is set up and compared with Lat. *aqua* 'water' ("lat. *aqua* wird ursprünglich 'Getränk' bedeutet haben." But a Latin etymology based on a Hittite root is surely premature.) The sentence is then translated "Nun BROT werdet ihr essen, Wasser ferner werdet ihr trinken." The further identification of an abl. sing. *ú-i-te-ni-it/d* and other case forms rests on their appearance in sentences containing ideograms for 'oil,' 'springs,' 'basins,' etc. These combinations are worked out with the greatest care and acumen, and certainly make one "take notice." Still one cannot feel yet that the matter is beyond doubt.

In the sentence *ú-ug-ga* ^{SAL}*An-na-an-na-áš e-eš-mi*, translated "Ich bin Annannas (ein Frauennamen)," the resemblance of the first word to Lat. *ego*, Gr. *ἐγώ*, etc., is not over-impressive, but that of the last word to IE. **esmi* (Skt. *asmi*, Slav, *jesmǐ*, Gr. *εἰμι* from **έσμι*) is striking enough to tempt anyone. And the ending *-mi* seems to be pretty well confirmed otherwise. But for most of the verb forms (and it is just in the verb system, as represented by the author, that the resemblance to Indo-European is most uncanny) the means by which their identification has been reached is not described. True, so many different paradigms are given, with similar endings constantly recurring, that the only question can be as to the correct attribution of these endings to particular persons and tenses. How far does it rest on internal evidence, and how far on resemblance to Indo-European forms? Some experimental use of the comparative method in advance of proved relationship need not be utterly condemned. Only one demands the more strenuously that the results approve themselves on a large scale with overwhelming conviction.

This is the real issue, and it is one which despite the author's confidence is not finally settled in the present work, nor even put before us in form for final judgment. Not until he has published the continuous texts with his interpretation shall we be in a position

to know how well his method is justified by results. It cannot then remain long doubtful whether the inflectional system set forth in the present work is a reality or a pyramiding of (certainly remarkable) plausibilities. If the interpretation of continuous texts of considerable extent is generally accepted by cuneiform scholars as in the main successful, then the grammatical constructions underlying it will have proved sound. In that case it will not be possible, in my opinion, to deny an Indo-European substratum in the Hittite language.

This would, however, be far from approving the bald statement that Hittite is an Indo-European language, or accepting it on an equal footing with other IE. languages of early date. We should be face to face with the problem of a peculiar type of mixture, Indo-European inflection overlaid with an alien vocabulary. For the words known from the vocabulary published by Delitsch, with the exception of certain pronouns, have a wholly un-Indo-European appearance, likewise the names of the Hittite kings, and even if we should accept Hrozný's IE. etymologies for certain words, it would remain true that the Hittite vocabulary is in large measure non-Indo-European. Now in the case of a mixed language it is the vocabulary that is the borrowed element in the first instance, not the inflectional system. It would be preposterous to represent the mixture in early English as a direct borrowing of the English inflectional system by the Normans (whatever mixture there was in Norman French was in the adoption of English words). It was rather that the native English borrowed much of the French vocabulary, retaining their own inflectional system, and that the resulting mixture in English was finally adopted by the Normans in place of French. If the substitution of French in the vocabulary had been much more thorough than it actually was, it would furnish a parallel for what we should have to assume of the mixture in Hittite. Only the relation of invader and native would be reversed, for it is most unlikely that in that region and period the earlier native population was Indo-European and the invaders non-Indo-European. In other words we should explain the situation by assuming that Indo-European-speaking invaders, while they were racially absorbed by the earlier population, also adopted much of their vocabulary,

but adapted it to their own inflectional system. The resulting mixture became the standard language of the Hittites, of whatever origin.

The present state of the question may be presented in terms of comparison. The Indo-European evidence in the case of Hittite is not even remotely comparable to that which we have in the case of "Tocharian" ("Kuchean"). Here the texts are mostly translations of known works, so that the meaning does not rest on surmise. We have the familiar words of relationship and numerous other words and inflectional forms of the most obvious Indo-European character, also a complete set of numerals from the accounts of a Buddhist monastery. Nothing could be more startling than to find in Chinese Turkestan a language belonging to the Indo-European family, but not to the Indo-Iranian branch, and showing in some respects notable agreement with the European languages. Nothing could a priori invite greater skepticism. Yet, though the records are some 2,000 years later than the Hittite, the evidence was so clear that there has never been a murmur of doubt as to the main fact. On the other hand the Indo-European evidence in the case of Hittite is vastly stronger than in the case of a number of languages of which various scholars assert Indo-European affinity, e.g., Lycian, Lydian,¹ Eteocretan.²

¹ Hrozný takes as established the Indo-European affinities of Lycian and Lydian, but states that in them "in contrast to Hittite" the non-Indo-European elements appear to be in the majority. Littmann, *Lydian Inscriptions*, pp. 78 ff., mentions a few points of resemblance to Indo-European, but without attaching much weight to them. They are in fact far from constituting any clear evidence.

² See note on pp. 203-4, which is an addendum to this article.